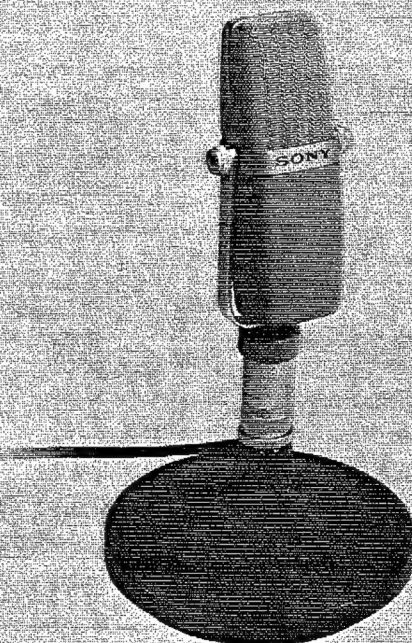


C-38B

Serial No. 5481 and later



FET CONDENSER MICROPHONE

SPECIFICATIONS

Battery: 9 V dc, battery size "006P" or equiv.
(IEC designation 6F22)

Power Supply: Standard operating voltage: 9 V
Minimum operating voltage: approx. 7.5 V
Current drain: less than 2 mA (with battery)
less than 5 mA
(with external power supply)

Continuous battery duration: more than
200 hours with a 006P dry battery
Accepts external power supply of 24 – 54 V dc
Uni-directional and omni-directional

Directivity:

Output Impedance: 250 ohms \pm 20% (balanced)

Output Level:

Position of the Pad Switch	Output impedance	Effective output level* ¹	Open circuit output level
[0]	250 ohms	–47.8 dBm	0.4 mV/ μ bar
[–8 dB]	250 ohms	–55.8 dBm	0.16 mV/ μ bar

Deviation \pm 2 dB

*¹ 0 dBm = 1 mW/10 μ bar, 1,000 Hz

Frequency Response: 30 Hz – 16,000 Hz

Noise Level: S/N ratio: better than 50 dB (1,000 Hz,
1 μ bar)

Inherent noise: less than 24 dB SPL
(0 dB = 2×10^{-4} μ bar)

Wind noise*²: less than 44 dB SPL

Induction noise of external magnetic
field*³: 5 dB SPL/m gauss

*² Wind noise is the value measured by
applying a wind velocity of 6.6 ft./s.
from all directions to the micro-
phone. The mean value is taken and
converted to the equivalent input
sound level.
(0 dB = 2×10^{-4} μ bar)

*³ The external magnetic field in-
duction noise is measured with
the microphone placed in the alter-
nating magnetic field of 50 Hz,
1 milligauss. The maximum noise
value is taken and converted to
the equivalent input sound level.
(0 dB = 2×10^{-4} μ bar)

— Continued on next page —

SONY[®]

SERVICE MANUAL

Maximum Sound Pressure Input Level*4:

140 dB SPL:

*4 This is the maximum input level which produces less than 1 % wave distortion at the output with 1,000 Hz, and less than 1 % intermodulation distortion at the output signal with 70 Hz — 7 kHz.

Dynamic Range: Approx. 116 dB

Acceptable Preservation Temperature: —4° to 140° F (—20° to 60° C)

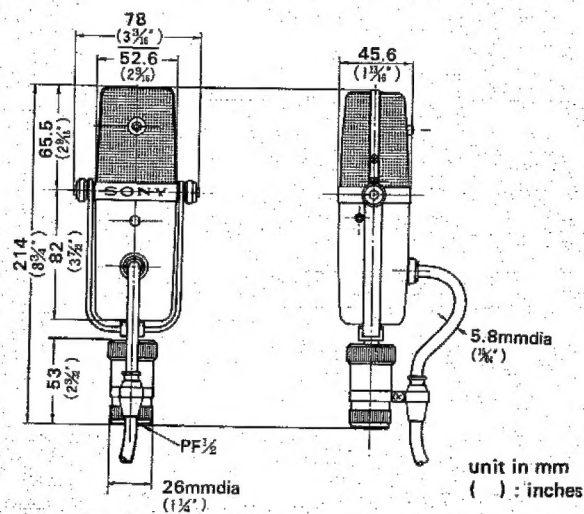
Proper Operating Temperature: 32° to 140° F (0° to 60° C)

Microphone Cable: Approx. 5.8 mm ($\frac{15}{64}$ inches) dia, 4-conductor shielded cable with a CANNON XLR-3-12C plug, 6 m (20 feet) long

Mounting Thread: PF $\frac{1}{2}$

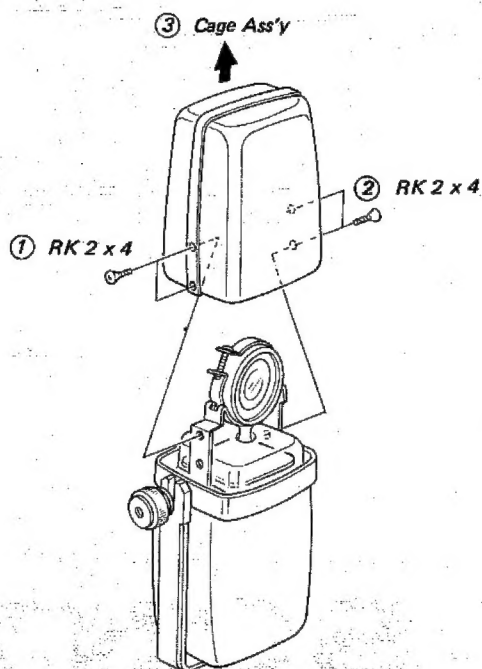
Weight: 650 g (1 lb 7 oz) without cable

Dimensions:

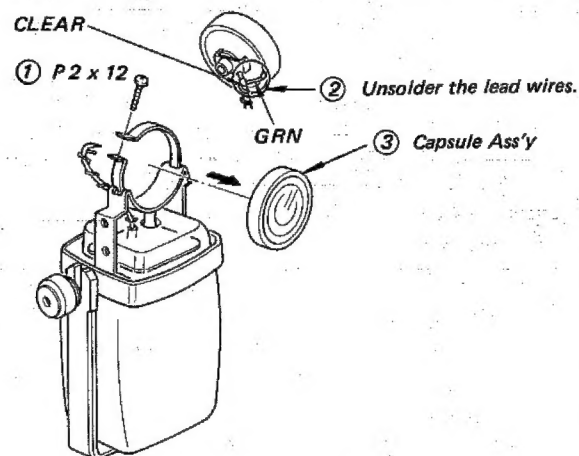


**SECTION 1
DISASSEMBLY**

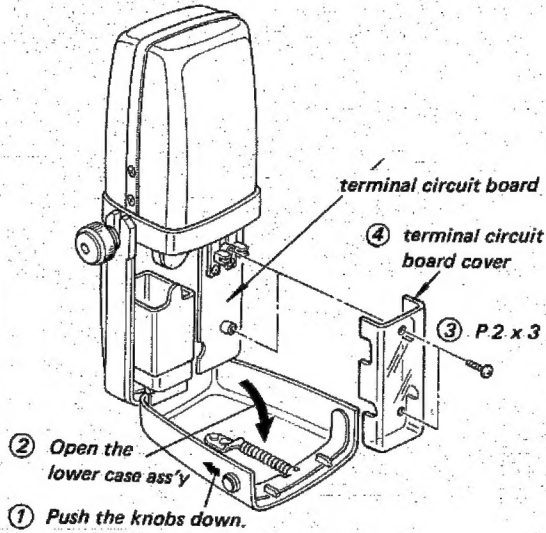
Cage Ass'y Removal



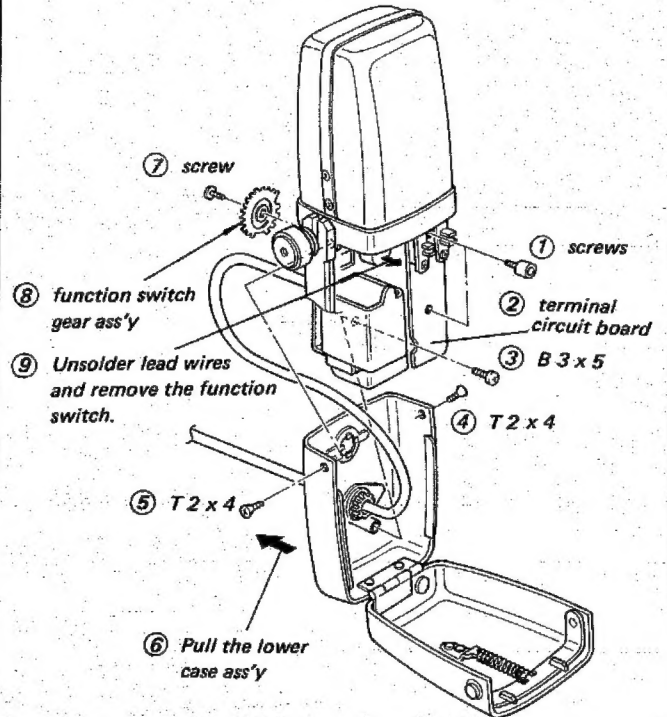
Capsule Ass'y Removal



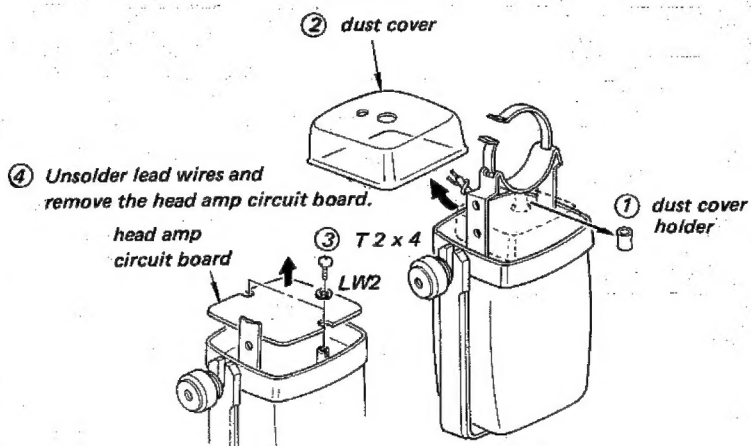
Terminal Circuit Board Cover Removal



Function Switch Removal



Head Amp Circuit Board Removal



SECTION 2 DIAGRAMS

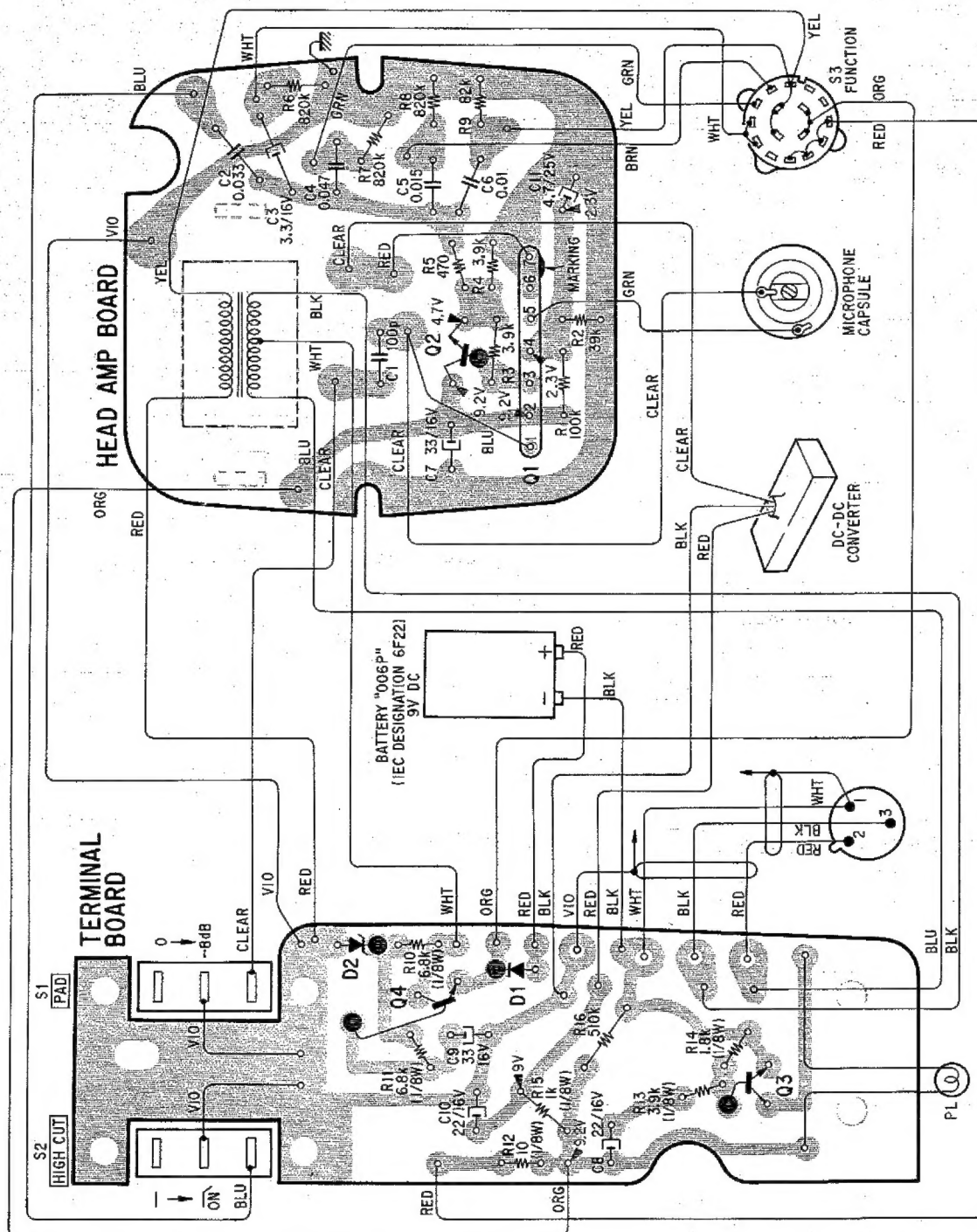
2-1. MOUNTING DIAGRAM

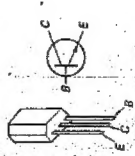
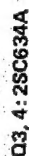
— Conductor Side —

CAUTION

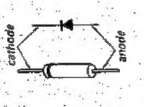
The head amp board has been carefully adjusted at the factory. If some trouble occurs on it, replace the head amp board as a part. The parts on the head amp board are not individually available.

Note:
● CONNECTION : B+ pattern

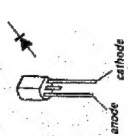






D1: 1T22A



D2: 1T243M



Note:

- All capacitors are in μF unless otherwise noted, $\text{pF} = \mu\mu\text{F}$
- 50WV or less are not indicated except for electrolytics.
- All resistors are in ohms, $\%W$ unless otherwise noted.
- $k\Omega = 1000\Omega$, $M\Omega = 1000k\Omega$
- Δ : internal component.
-  : B+ bus.
-  : panel designation.
- Voltages are dc with respect to ground unless otherwise noted.

- Readings are taken with a 20,000-ohm-per-volt VOM.
- Voltage variations may be noted due to normal production tolerances.
- Switch

Ref. No.	Switch	Position
S1	PAD	0
S2	HIGH CUT	OFF
S3	FUNCTION	OFF

SECTION 3 EXPLODED VIEWS

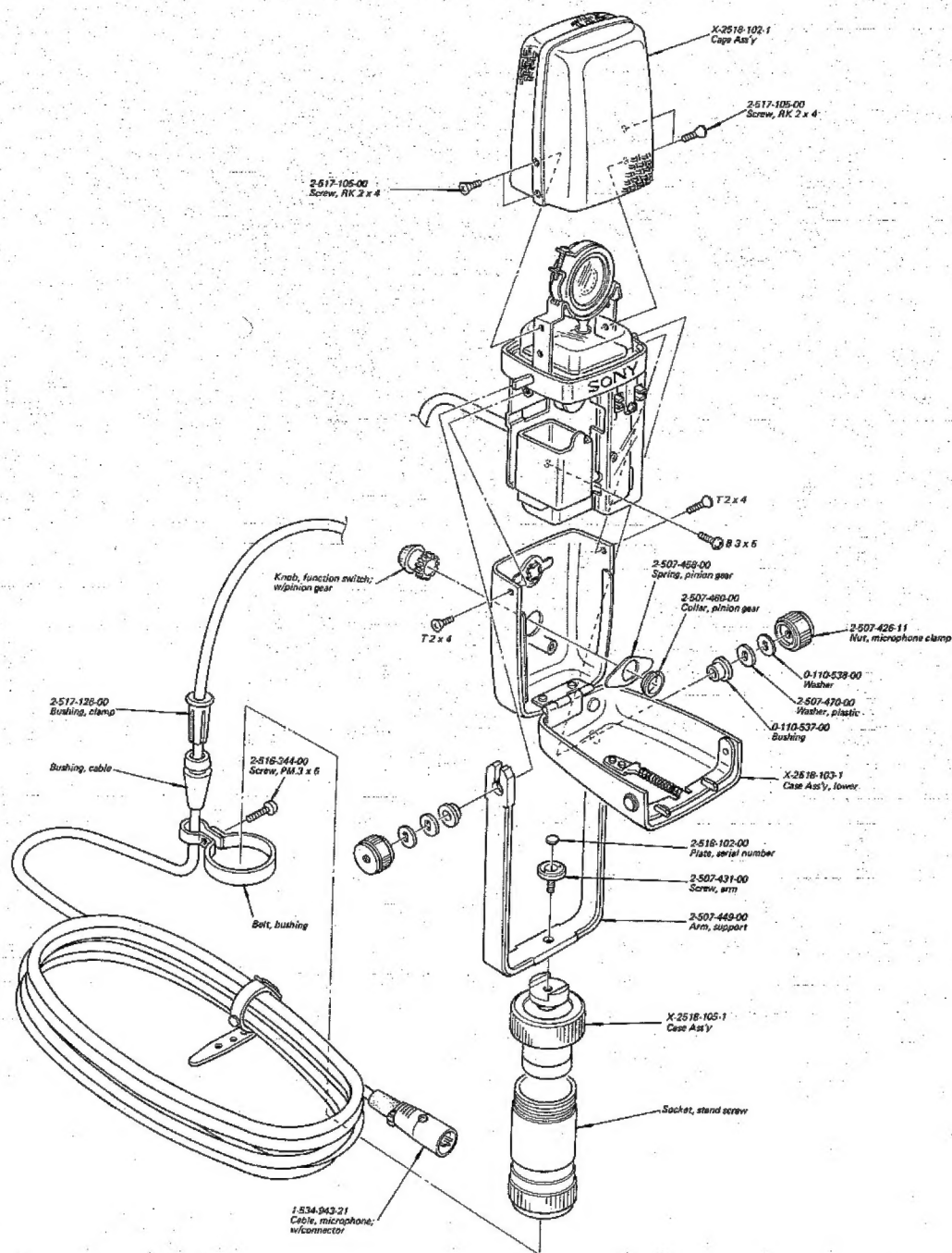
A

B

C

D

(1)



Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
- (-) = slotted head

SECTION 4 ELECTRICAL PARTS LIST

Ref. No. Part No. Description

COMPLETE CIRCUIT BOARD

A-4518-014-A Head Amp

SEMICONDUCTORS

Transistors

Q3, 4 2SC634A

Diodes

D1 1T22A

D2 1T243M

CAPACITORS

All capacitors are in μF and electrolytic.

C8 1-121-990-11 22 16V

C9 1-121-403-11 33 16V

C10 1-121-990-11 22 16V

RESISTORS

All resistors are in ohm. $k\Omega = 1000\Omega$

R10, 11 1-202-032-11 6.8k 1/8W composition

R12 1-201-856-11 10 1/8W composition

R13 1-202-018-11 3.9k 1/8W composition

R14 1-201-650-11 1.8k 1/8W composition

R15 1-201-634-11 1k 1/8W composition

R16 1-202-448-11 510k 1/4W composition

SWITCHES

S1, 2 1-516-608-00 Slide, PAD, HIGH CUT

S3 1-516-609-00 Rotary Slide, function

MISCELLANEOUS

PL 1-518-268-00 Lamp, 4.5V, 40mA

A-4510-006-A Capsule Ass'y

A-4519-001-A DC-DC Converter Ass'y

1-534-943-21 Cable, microphone; w/connector

ACCESSORIES & PACKING MATERIALS

Part No. Description

0-110-572-00 Screwdriver

2-052-522-00 Adaptor, microphone stand

2-522-235-00 Bag, plastic; carrying case

2-522-237-11 Carton

2-599-080-21 Manual, instruction

3-701-628-00 Bag, plastic; microphone

Sony Corporation